

REMARKS

The Office Action dated June 29, 2004 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto. Claim 1 has been cancelled without prejudice. Claims 9 and 10 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added, and no issues are raised which require further consideration or search. Claims 2-13 are respectfully submitted for consideration.

Claims 1-3 and 5-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Suonvieri (U.S. Patent No. 5,715,245) in view of Hoffpauir (S.I.R. Number H1,918). The Office Action took the position that Suonvieri disclosed all of the elements of claims 1-3 and 5-13, except for a network management system that is operatively interconnected by means of telecommunication connections comprising traffic channels and control channels. The Office Action then relied on Hoffpauir to cure this deficiency in Suonvieri. The above rejection is respectfully traversed for the reasons which follow.

Claim 2 recites a method of connecting network elements to a radio system comprising one or more network elements, a base station controller and a network management system that are operatively interconnected by means of telecommunication connections including traffic channels and control channels. Furthermore, system information between the network elements is transmitted in frames that are divided into time slots, and in which system the base station controller controls one or more network

elements, and network element identification information has been fed into a network element to be installed, and in which method the network element is physically connected to the system by means of the telecommunication connections. In frames used by the base station controller for communication with the network elements, unused consecutive time slots of the frames are divided into one or more groups, and each group having one time slot used as a communication channel as regards time slot allocation from said group. The claim also recites predetermining identification information for the base station controller about network elements allowed to be connected thereto. After being physically installed, the network element to be installed searches the frames received by means of the telecommunication connections for the communication control channels of the groups and identifies free groups by means of the communication channels found. The network element transmitting over the communication channel of the group its identification information and hardware information to the base station controller comparing the identification information with the identification information about the allowed network elements. When the identification information is allowed, accepting the network element, and the base station controller allocates from the group necessary time slots for the use of communication between the network element and the base station controller and informs the network element of the allocated time slots over the communication control channel, and the allocated time slots are branched by software through the telecommunication connections to the network element.

Claim 11 recites a radio system comprising one or more network elements, a base station controller and a network management system that are operatively interconnected by means of telecommunication connections comprising traffic channels and control channels. The system information between the network elements is transmitted in frames that are divided into time slots, and the base station controller controls one or more network elements that comprise network element identification information. In frames arranged to be used by the base station controller for communication with the network elements, unused consecutive time slots of the frames are divided into one or more groups, and each group having one time slot used as a communication channel as regards time slot allocation from said group. Claim 11 further recites predetermining identification information for the base station controller about network elements allowed to be connected to the base station controller. After being physically installed, the network element to be installed is arranged to search the frames received by means of the telecommunication connections for the communication channels of the groups and to identify free groups by means of the communication channels found. The network element is arranged to transmit over the communication channel of the group its identification information and hardware information to the base station controller which is arranged to compare the identification information with the identification information about the allowed network elements, and when the identification information is allowed, to accept the network element. The base station controller is arranged to allocate from the group necessary time slots for the use of communication between the network

element and the base station controller and to inform the network element of the allocated time slots.

As will be discussed below, Suonvieri and Hoffpauir, whether viewed alone or in combination, fail to disclose or suggest the elements of the claims, and therefore fail to provide the features discussed above.

Suonvieri discloses data transmission from a controller to successive base stations linked in series. More specifically, Suonvieri teaches a method to automate and facilitate the setting up or configuration of the structure of the data transmission network between the base station and the base station controller or switching center. Configuration data indicating in which timeslots of the frame the useful data intended for the network element is carried is transmitted to the network element in a predetermined timeslot of the frame. The base stations look for configuration data intended for them in the same predetermined time slot, and in the base station network, a preceding base station places the configuration data intended for the following base station in that same predetermined time slot.

Hoffpauir discloses an integrated authentication center and method for authentication in a wireless telecommunications network. The integrated authentication center includes an application process, a home location register, and an authentication center. The method disclosed in Hoffpauir includes the steps of receiving a request from a subscriber for service and requesting approval from a home location register to provide service to the subscriber.

With respect to the rejection of independent claims 2 and 11, these claims recite, in part, that unused consecutive time slots of the frames are divided into one or more groups, called transmission groups. Applicants respectfully submit that Suonvieri and Hoffpauir fail to disclose such a limitation. The Office Action cites the BTS2 Calls 303 and BTS3 Calls 304 in Figures 3 and 4 of Suonvieri as disclosing “unused consecutive time slots of the frames being divided into one or more groups.” The groups BTS2 Calls and BTS3 Calls disclosed in Suonvieri are not unused time slots. They are time slots previously reserved for the base stations BTS2 and BTS3, respectively.

According to the claimed invention, on the other hand, the transmission groups are marked as unused. The time slots of the groups are not previously reserved for a particular base station, as they are in Suonvieri. Rather, in the present invention, the allocation is performed later. Hoffpauir also contains no such disclosure.

Additionally Applicants respectfully submit that Suonvieri and Hoffpauir fail to disclose or suggest “each group having one time slot used as a communication channel as regards time slot allocation from said group,” as recited in claims 2 and 11. The Office Action cites Figure 5 of Suonvieri as disclosing that each group has one time slot. Figure 5, however, merely illustrates the channel capacities required by each BTS. Thus, Figure 5 shows BTS1 as requiring 5 channels, BTS2 requiring 2 channels, and BTS3 requiring 1 channel. This is a description of the traffic channel capacity intended for each base station (Suonvieri, Column 5, line 13). Therefore, Suonvieri does not disclose a communication channel used for allocating time slots from the group, but rather discloses

traffic channel capacity. Suonvieri fails to disclose reserved time slots and also fails to disclose such groups. Hoffpauir also fails to disclose such a limitation.

Furthermore, according to the claimed invention, after a base station or network element is connected to the network and is able to receive signals sent by the BSC, the base stations or network elements search for the transmission groups of an unused time slot by searching the communication time slots of the groups. When a communication channel is found, the BTS or network element may identify a transmission group. After a group has been identified, the BTS or network element transmits id and hw information to the BSC, which in turn allocates necessary resources for the BTS on the basis of the transmission received from the BTS or network element. Both Suonvieri and Hoffpauir fail to disclose these steps. Thus, for at least the reasons discussed above, the combination of Suonvieri and Hoffpauir fail to disclose or suggest all of the elements of claims 2 and 11.

Applicants note that claims 3 and 5-10, and 12-13 are dependent upon claims 2 and 11, respectively. Therefore, Applicants respectfully submit that claims 3, 5-10 and 12-13 should be allowable for at least their dependence upon claims 2 and 11, and for the specific limitations recited therein.

Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Suonvieri in view of Hoffpauir and in further view of Poon (U.S. Patent No. 5,940,380). The Office Action took the position that the combination of Suonvieri and Hoffpauir discloses all of the elements of the claim, with the exception of a method wherein the network

element selecting another base station controller group communication channel when the base station controller rejects the network element, the network element transmitting its identification information and hardware information over the communication channel to another base station controller, and the network element repeating this procedure until a base station controller accepts the network element. The Office Action relies on Poon to cure these deficiencies in the combination of Suonvieri and Hoffpauir. Applicants respectfully submit, however, that the combination of Suonvieri, Hoffpauir, and Poon fails to disclose or suggest the elements of the claims, and therefore fails to provide the advantages discussed above.

Poon discloses a method and arrangement relating to radio communication networks. Specifically, Poon teaches a method in which the communication unit ignores communication with the first base station in certain time slots assigned to the dedicated communication channel, and instead uses those time slots to receive signals from the second base station.

Applicants note that claim 4 is dependent upon claim 2. Additionally, Poon fails to cure the deficiencies in Suonvieri and Hoffpauir discussed above with respect to claim 2. Therefore, Applicants respectfully submit that claim 4 should be allowed for at least its dependence upon claim 2, and for the specific limitations recited therein.

Applicants respectfully submit that the cited prior art references of Suonvieri, Hoffpauir, and Poon, whether viewed alone or in combination, fail to disclose or suggest critical and important elements of the claimed invention. These distinctions are more

than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 2-13 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: 1-month Extension of Time